University of Salford MANCHESTER

Research & Knowledge Exchange
School of Science, Engineering & Environment

Job Opportunity

Machine Learning Engineer **/ KTP Associate position**

TP Transcription Hybrid (UK)

Overview, Job Description and Person Specification

Knowledge Transfer Partnership (KTP) Associate with TP Transcription

Overview

In collaboration with TP Transcription, The University of Salford has been awarded a 36-month Knowledge Transfer Partnership (KTP). This position is essential to develop new AI capabilities to transcribe audio and video recordings with improve accuracy, efficiency and affordability. Main areas of work will include developing an AI transcription system optimised for accurately transcribing speech from multiple speakers and developing a minimum viable product (MVP) for easy management of transcription projects.

This position is hybrid as the associate should be in a position to travel to the University of Salford campus as required to work with the academic team. The associate will also be required to travel to meetings near Rhyl in North Wales on a monthly basis.

TP Transcription has a vision of developing AI-assisted transcription models at different price points and accuracy levels. This will enhance their transcription process, improve efficiency and lead to the development of new AI transcription services providing greater affordability.

This is an opportunity to drive a significant technological development, supported by comprehensive training and career development for the right candidate. This will be complimented by the Academic team at the University of Salford led by Professor Mo Saraee, Chair in Data Science and Mr Nathan Topping, Lecturer in Data Science.

Job Purpose

The focus will be to develop a state-of-the-art AI transcription system, leading to a commercially viable product, and generating impact and relevance in the application of AI/ML within language technologies.

Specific activity this will include:

- Working with common deep learning libraries (TensorFlow/PyTorch) and using existing foundation models to develop and test an AI-powered speech-to-text transcription system
- Designing, implementing, testing and maintaining ML models
- Developing, debugging and validating code and software
- Developing a Minimum Viable Product
- Ensuring the delivery of core software engineering practices (writing clear, well documented and testable code)

The project will facilitate Knowledge Transfer and embedded capability to;

i) develop proprietary AI/ML models for the transcription market ii) develop and pilot minimum viable products. This will allow TP Transcription to develop the services offered to their existing academic and public sector client base and expand into new markets.

Responsibilities

The Associate will take on the challenging task of project managing this 36-month programme of research, development and implementation. This is an opportunity for the right candidate to become a key player within the business with an awareness of strategic and operational decision-making processes.

This Job Description is a guide to the work you will initially be required to undertake. It may be changed from time to time to meet changing circumstances. It does not form part of your Contract of Employment.

We are seeking a candidate committed to continuing Personal/Professional Development and able to engage with appropriate development activities as required for the role. For example, KTP project management training, Data Protection training and any other identified appropriate essential learning opportunities. As part of the role there will be regular performance development and monitoring to support and enable the associate to develop essential skills and knowledge.

Person Specification

Qualifications

	The successful candidate should possess one of the following	**E / D***	**Tested by**
1	A 2.1 minimum degree (BSc) BEng/BSc in Computer Science or Data Science **OR** A 2.1 minimum degree (BSc) BEng/BSc in a STEM subject with some programming requirement plus quantifiable experience in a technical job role	E	A
2	Relevant postgraduate degree/equivalent professional experience in a related field	E	A

Background, Experience & Knowledge

	The successful candidate should have demonstrable knowledge of		
3	Knowledge of machine learning, statistical analysis and data mining methodologies and experience applying these techniques at an advanced level	E	A
4	Knowledge and experience of software development	E	A
5	An understanding of the field of Natural Language Processing (NLP) and experience working on NLP projects at an advanced level	E	A/I
6	A strong understanding of the theory and principles behind deep learning, and deep learning architectures such as recurrent neural networks (RNNs) and transformers	E	A/I
7	Experience completing ML projects focused on Automatic Speech Recognition and/or implementing data processing pipelines for video or audio data	D	A/I
8	Experience working with common Python libraries for deep learning, such as TensorFlow or PyTorch.	E	A/I
9	Experience in designing and evaluating machine learning models, as well as deploying and maintaining them in production.	E	A/I

10	Experience developing, debugging, and validating code following core software engineering practices (writing clear, well documented and testable code)	E	A/I
11	Experience deploying machine learning models to production environments, including knowledge of containerization (Docker, Kubernetes) and cloud platforms (AWS, GCP, Azure)	D	A/I
12	Experience developing user-facing applications, with knowledge of front-end technologies or frameworks (e.g., Flask, Django)	D	A/I

Skills & Competencies

	The successful candidate should demonstrate		
13	Exceptional ability to communicate complex technical information clearly and concisely to non-technical audiences across levels of seniority	E	A/I
14	Ability to build and maintain excellent working relationships with a range of people at all levels across the department/stakeholders.	E	A/I
15	Excellent organisational skills, with an ability to prioritise issues and multitask according to business need.	E	A/I